



**WELL 9 PFAS TREATMENT FACILITY
PRE-APPLICATION MEETING SUBMITTAL
MARCH, 2021**

Applicant/Owner:

Sammamish Plateau Water
1510 – 228th Avenue SE
Sammamish, WA 98074
Contact: Jim Konigsfeld, P.E. – (425) 295-3217 – jim.konigsfeld@spwater.org

Design Consultant:

Brown and Caldwell
701 Pike Street, Suite 1200
Seattle, WA 98101
Contact: Ron Bard, P.E. – (206) 749-2261 – rbard@BrwnCald.com

Project Location: 940 1st Ave NE, Issaquah, WA.

Tax Lot #(s): 8843500121 & 8843500120

Site Zoning: Community Facilities (CF) zone, with development standards equal to the Intensive Commercial (IC) zone.

Project Narrative

A. Project Site

The project site is located at 940 1st Ave S, in Issaquah, WA, the same location of the District's existing *Well 9 Corrosion Control Facility*. This existing facility houses Well 9 and provides pH adjustment, chlorination and fluoridation of the ground water produced from Well 9, in addition to two offsite wells. A 24-inch ductile iron water main transmit water from Wells 7 and 8, located at 6601 E Lake Sammamish Parkway SE, to the project site where it is blended with water obtained from the Regional water system. Treated water is transmitted to distribution system through a 30-inch ductile iron water main.

The existing *Well 9 Corrosion Control Facility* provides Sodium Hydroxide injection system for pH adjustment, a sodium hypochlorite generation and injection system, a fluoride injection system, and a generator to support the facility's full electrical load.

B. PFAS Treatment Facility

This Project will construct a new granular activate carbon (GAC) treatment facility to remove PFAS from the ground water produced from three groundwater wells. The GAC treatment system consists of eight (8) 12-ft diameter pressure vessels approximately 27-ft in height, located within a new steel framed building.

Major components of the project include:

- The GAC treatment system including the process piping
- Pre-engineered building (90 x 54 x 43 feet) to house the GAC treatment system
 - Building heating to 50 degrees (natural gas)
 - Building ventilation
 - Building electrical feeder from existing service equipment
 - Some additional gravel area adjacent to the building
 - Restroom
 - Building and gravel runoff directed to the existing infiltration pond
 - Note: foundation will be designed by the engineer, building envelope will be specified by the engineer, but a detailed design will be submitted by the contractor at the start of construction
- Water System connections:
 - Raw water piping from the existing 24-inch diameter groundwater transmission pipe to the GAC treatment system
 - New tie-in of the regional water supply and GAC treated water into the 30-inch diameter transmission pipe
 - Relocation of the finished water treatment chemical injection ports to a point following the new GAC treated water line and the regional water line tie-in
 - Backwash supply from GAC treated water
- Backwash waste disposal
 - A new 80,000-gallon storage tank (Backwash Waste Tank) for disposal of backwash water from the GAC treatment system, (25-ft diameter x 25-ft tall)
 - Piping from the Backwash Waste Tank to both the existing infiltration pond and to the sanitary sewer system, for disposal of wasted water.
 - Expansion of the existing infiltration pond to accommodate backwash tank volume and added impervious surfaces. Note: the existing pond infiltrates water generated by Well 9 during startup in addition to site runoff flows.
- Sanitary Side Sewer Connection
 - Installation of a new 6-inch DI side sewer encased in concrete for the disposal of waste water from the backwash system, and for sanitary waste generated from the GAC's restroom.
 - Removal and/or protection of existing trees impacted by the construction of the side sewer.

C. Corrosion Control Facility Modifications

As part of the Project, the existing Corrosion Control Facility requires replacement of existing equipment due to the age of the facility, and the installation of a new brine tank for the existing sodium hypochlorite generation

system. The work will replace the two existing Sodium Hydroxide tanks, and the installation of a 24-ton Brine tank.

Project Drawings

Attached is a reduced drawing set of the 90% Project Drawings for the facility. These plans are currently being revised based on recent District comments and should include:

- Architectural revisions to the exterior of the building to improve the ascetics of the building
- Wetland report. This will be submitted to the City if it is completed prior to the Pre-application meeting.
- Tree report, including a tree protection and replacement plan. These will be submitted to the City if they are completed prior to the Pre-application meeting.

Building Architectural

The District is working with the consultant to provide a facility with more architectural design to remove the box like look of the building. The design is not yet complete, but our direction includes:

- Reducing the building height over the first bay, where the electrical room and bathroom are located.
- Providing- a multi-level roof line over the GAC vessels. This would increase the building height from about 43-ft to approximately 50-ft.



SEPA

The District is proceeding with the completion of the SEPA process. The District will be the lead agency with the General Manager as the Responsible Official.



**WELL 9 PFAS TREATMENT FACILITY
APPLICANTS PRE-APPLICATION MEETING QUESTIONS**

1. Will the project require any frontage improvements along 1st Avenue NE and/or NE Juniper Street?
2. Does the building need to meet any architectural design requirements?
3. Will the building height up to 50-ft be an issue or require any special approvals?
4. It is the District's understanding that there are 48-significate trees located on the property, and even with the expected trees removed (12 impacted trees) as part of the work, the project will meet the requirements of IMC 18.12.1385 Tree Retention Requirements, which requires trees on commercial lots be retained at a rate of 25 percent of the total caliper (dbh) of all significant trees in the developable site area, and no additional trees will need to be replanted to meet IMC 18.12.1385.

However, during a Collaboration Meeting, the City indicated that the Project would need to plant trees to meet the Tree Density requirements of IMC 18.12.1370, which would require 81 trees to be maintained on the project site. The site is currently at a 33-tree deficit.

The Tree Density codes specifically states that the Tree Density shall be "maintained". We are not able to find a requirement to plant new trees to increase the number of trees on the site. IMC 18.12.1390 does state that 1 replacement tree is required for every 6-inches of caliper of trees removed if remaining tree density is below the minimum requirements, indicating that a development can be below the Minimum Tree Density Requirement.

Please confirm that the District only needs to replant 1 replacement tree for every 6-inches of caliper of tree removed, and no further trees will be required.

5. We anticipate significant impact to an off-parcel tree's critical root zone based on the proposed project plans and is recommended for removal. This tree (a 30-inch DBH Douglas-fir) is located just north of 180 NE Juniper St but south of the subject parcel's property line.

Does the City recommend this tree be included in calculations for Minimum Density Requirements and Maximum Tree Removal for Development? Or replaced at a 1:5 ratio based on the loss of DBH?

6. The project site currently consists of two tax parcels. The existing building was permitted by the City and built in 1994. This existing building extends over the common property line of both lots.

Please confirm that the City is going to require that the Project will require a Consolidation or BLA so that the existing building is located on a single lot.

7. It is the District's understanding that there is a class 2 stream located within 100-ft of the parcel boundary and the tax parcel is within the normal stream buffer.

Does the stream buffer extend across the roadway?

8. **Is the Issaquah North Fork a phosphorous-sensitive creek or has an existing aquatic life use? This is to determine if phosphorous pretreatment and enhanced treatment is needed per V-2 of SWMMWW since the infiltration basin appears to be within ¼ mile of the creek?**

9. The drainage management approach is to size the additional infiltration area needed for the additional volume and expand the existing pond to meet the additional volume. The existing functioning pond volume we remain the same with the existing flow inputs, settling basin and overflow.

Please confirm this approach is valid